

CLAIMS

1. A method for performing a scheduling algorithm in a scheduler of a wireless communication system, comprising the steps of:

obtaining from a communication unit a minimum resource parameter, wherein said minimum resource parameter indicates a minimum of resources allocated to the communication unit in a scheduling frame to meet a resource constraint

scheduling allocation units for radio access to the communication unit in a scheduling frame in accordance with the minimum resource parameter.

2. A method performed in a communication unit of a wireless communication network for generating a minimum resource parameter used in a scheduling algorithm to schedule allocation units in a scheduling frame for radio access to the communication unit in accordance with the minimum resource parameter, comprising the steps of

calculating the minimum resource parameter based on a determination of the power expended for processing of the scheduling frame in the communication unit, and

signaling the calculated minimum resource parameter to the scheduler.

3. The method according to claim 1 or 2, wherein the minimum resource parameter represents a minimum number of allocation units scheduled for a user or a service in a scheduling frame.
4. The method according to one of claims 1 to 3, wherein the minimum resource parameter represents a minimum number of information bits per scheduling frame for a user or a service.
5. The method according to one of claims 1 to 4, wherein the minimum resource

parameter represents a minimum ratio of processed information bits to the expended processing and operating power spent during radio access in the communication unit.

6. The method according to one of claims 1 to 5, wherein the minimum resource parameter represents a sufficient quantity to exceed a power efficiency threshold in a scheduling frame.
7. The method according to one of claims 1 to 6, wherein the minimum resource parameter is signaled periodically from the communication unit to the scheduler.
8. The method according to one of claims 1 to 7, wherein the minimum resource parameter is signaled from the communication unit to the scheduler upon request by the scheduler.
9. The method according to one of claims 1 to 8, wherein the signaling of the minimum resource parameter is initiated by the communication unit upon fulfillment of power management conditions.
10. The method according to one of claims 1 to 9, wherein the scheduling step includes considering in addition at least one of the following scheduling parameters channel condition, amount of data available for transmission, quality of service, delay, data rate and carrier to interference ratio.
11. The method according to one of claims 1 to 10, wherein the scheduling frame has at least one of a time division, frequency division or code division frame structure.
12. The method according to one of claims 1 to 11, wherein the allocation units have a quantity of either one of transmittable information bits, internet protocol packets, code blocks or modulation symbols.
13. The method according to one of claims 1 to 12, wherein the minimum resource parameter is signaled by the communication unit on a separate control channel associated to the data channel over which the allocation units are transmitted.

14. The method according to claim 2, wherein the calculation step additionally includes considering the associated overhead signaling appended to the information bits for the scheduling frame.
15. The method according to claim 2, wherein determination of the power expended includes the power units for each bit processed and/or the power units expended for processing of a scheduling frame.
16. A mobile terminal comprising:

means for calculating a minimum resource parameter used in a scheduling algorithm to schedule allocation units in a scheduling frame for radio access to the communication unit in accordance with the minimum resource parameter, calculating the minimum resource parameter based on a determination of the power expended for processing of the scheduling frame in the communication unit; and

means for signaling the minimum resource parameter to a base station or network resource controller of a wireless communication system.
17. A base station of a wireless communication network, comprising:

means for obtaining a minimum resource parameter wherein said minimum resource parameter indicates a minimum of resources allocated to a communication unit in a scheduling frame to meet a resource constraint, and

means for scheduling allocation units for at least one of transmission and reception to a mobile terminal in accordance with the minimum resource parameter.